

1 That which is claimed is:

2           1. An information management and synchronous communications system for

3 generating menus comprising:

4           a. a central processing unit,

5           b. a data storage device connected to said central  
6           processing unit,

7           c. an operating system including a graphical user  
8           interface,

9           d. a first menu stored on said data storage device,

10          e. application software for generating a second menu  
11          from said first menu,

12           wherein the application software facilitates the generation of the second menu by

13          allowing selection of items from the first menu, addition of items to the second menu and

14          assignment of parameters to items in the second menu using the graphical user interface of said

15          operating system and wherein data comprising the second menu is synchronized between the

16          data storage device connected to the central processing unit and at least one other computing

17          device.

18           2. An information management and synchronous communications system in

19          accordance with claim 1, wherein the second menu is a restaurant menu.

20           3. An information management and synchronous communications system in

21          accordance with claim 1, wherein the second menu is capable of being displayed on the display

22          screen of a wireless computing device.

23           4. An information management and synchronous communications system in

24          accordance with claim 3, wherein selections from the second menu are capable of being

25          transmitted to a receiving computer by wireless link.

1               5. An information management and synchronous communications system in  
2 accordance with claim 1, wherein the second menu is capable of being displayed on display  
3 screens of computers in a network.

4               6. An information management and synchronous communications system in  
5 accordance with claim 5, wherein the computer network is the internet.

6               7. An information management and synchronous communications system in  
7 accordance with claim 3, wherein selections from the second menu are capable of being  
8 transmitted to a receiving computer via the internet.

9               8. An information management and synchronous communications system in  
10 accordance with claim 1, wherein the second menu is created in conformity with hypertext  
11 markup language or extensible markup language.

12               9. An information management and synchronous communications system in  
13 accordance with claim 1, wherein the second menu overwrites the first menu.

14               10. The information management and synchronous communications system of  
15 claim 1, wherein the first menu and the second menu are both capable of being displayed in the  
16 same window on the display screen.

17               11. The information management and synchronous communications system of  
18 claim 1, wherein the items comprising the second menu are a subset of the items comprising the  
19 first menu.

20               12. An information management and synchronous communications system for  
21 generating menus comprising:

- 22               a. a microprocessor,  
23               b. a display device,  
24               c. a data and instruction input device,

1                   d.     a data storage device for storing information and  
2                   instructions entered through said data and  
3                   instruction input means or information generated by  
4                   said microprocessor,  
5                   e.     an operating system,  
6                   f.     a master menu stored on said data storage device for  
7                   generating a modified menu, and  
8                   g.     application software,  
9        wherein said microprocessor, operating system and application software are operative to display  
10      the master menu on the display device in response to instructions programmed into said  
11      microprocessor, operating system, application software and information and instructions entered  
12      through said data input device, and wherein said microprocessor, operating system and  
13      application software are operative to create the modified menu from said master menu in  
14      response to information and instructions entered through said data and instruction input device  
15      and wherein data comprising the modified menu is synchronized between the data storage device  
16      and at least one other computing device.

17                  13.    The information management and synchronous communications system of  
18      claim 12, further comprising means for transferring the modified menu to a digital computing  
19      device.

20                  14.    The information management and synchronous communications system of  
21      claim 13, wherein the digital computing device is a wireless handheld device.

22                  15.    The information management and synchronous communications system of  
23      claim 12, further comprising means for downloading the modified menu to the internet or a Web  
24      page.

1           16. The information management and synchronous communications system of  
2 claim 15, further comprising means for converting the modified menu to hypertext markup  
3 language or extensible markup language.

4           17. The information management and synchronous communications system of  
5 claim 15, wherein the items comprising the modified menu are a subset of the items comprising  
6 the master menu.

7           18. An information management and synchronous communications system in  
8 accordance with claim 12, wherein said operating system includes a graphical user interface and  
9 wherein said microprocessor, operating system and application software are operative to generate  
10 the modified menu by facilitating selection of items from said master menu using the graphical  
11 user interface of said operating system.

12           19. An information management and synchronous communications system in  
13 accordance with claim 12, wherein said master menu is organized in a hierarchical tree structure  
14 having branches comprising menu items and wherein the modified menu is at least partially  
15 generated by selecting items from the branches of the tree structure.

16

17

18           20. In a computer system having an input device, a storage device, a video  
19 display, an operating system including a graphical user interface and application software, an  
20 information management and synchronous communications method comprising the steps of:  
21           a. outputting at least one window on the video display;  
22           b. outputting a first menu in a window on the video  
23 display;  
24           c. displaying a cursor on the video display;

1                   d. selecting items from the first menu with the input  
2                   device or the graphical user interface;  
3                   e. inserting the items selected from the first menu into  
4                   a second menu, the second menu being output in a  
5                   window;  
6                   f. optionally adding additional items not included in  
7                   the first menu to the second menu using the input  
8                   device or the graphical user interface;  
9                   g. storing the second menu on the storage device; and  
10                  synchronizing the data comprising the second menu between the storage device  
11                  and at least one other data storage medium, wherein the other data storage medium is connected  
12                  to or is part of a different computing device.

13                 21. The method of claim 20, further comprising the step of transferring data or  
14                 instructions representative of the second menu to a remote digital device or Web page.

15                 22. The method of claim 21, wherein said data or instructions representative  
16                 of the second menu are transferred by a wireless link.

17                 23. The method of claim 20, wherein the selected items and optional  
18                 additional items are inserted into a second menu which is displayed in the same window as the  
19                 first menu.

20                 24. The method of claim 21, comprising the further steps of selecting at least  
21                 one item from the second menu and transmitting at least one item selected to another computer.

22                 25. The method of claim 24, wherein at least one item selected from the  
23                 second menu is transmitted to another computer by wireless link or the internet.

24                 26. The method of claim 21, wherein the second menu is displayed on the  
25                 remote digital device or Web page in page format.

1           27. The method of claim 20, wherein the second menu overwrites the first  
2 menu.

3           28. The method of claim 20, wherein the items comprising the second menu  
4 are a subset of the items comprising the first menu.

5

6           29. An information management and synchronous communications system for  
7 use with wireless handheld computing devices and hospitality computing systems comprising:

- 8
- 9           a. a central database containing hospitality  
10           applications and data,
- 11           b. at least one wireless handheld computing device on  
12           which hospitality applications and data are stored or  
13           displayed,
- 14           c. an application program interface, and
- 15           d. a communications control module;

16

17           wherein applications or data are synchronized wirelessly between the central database and at  
18           least one wireless handheld computing device and wherein the applications program interface  
19           and communications control module establish a seamless link between the data in the central  
20           database and the data on the wireless handheld computing device.

21           30. The information management and synchronous communications system of  
22           claim 29 wherein the communications control module and the application program interface  
23           enable the automatic generation of and updating of operator menus or screens on the handheld  
24           computer based on data from the central hospitality database.

1                   31. The information management and synchronous communications system of  
2 claim 30 wherein messaging formats are used which are in conformity with HTML or XML  
3 messaging formats.

4                   32. An information management and synchronous communications system for use  
5 with wireless handheld computing devices and hospitality applications comprising:

- 6
- 7                   a. a central database containing hospitality  
8                   applications and data,  
9
- 10                  b. at least one wireless computing device,  
11                  c. at least one wireless paging or beeper device,  
12                  d. an applications program interface, and  
13                  e. a communications control module;

14

15 wherein hospitality applications or data are synchronized between the central database, at least  
16 one wireless computing device and at least one wireless paging or beeper device and wherein  
17 messaging to the wireless paging or beeper device is enabled directly from the operator interface  
18 of the wireless computing device.

19                  33. An information management and synchronous communications system  
20 comprising:

- 21                  a. a central database containing applications and data,  
22                  b. a first computing device associated with the central  
23                  database,  
24                  c. a second computing device associated with a second  
25                  storage medium containing applications and data,  
26                  d. an applications program interface, and  
27                  e. a communications control module;

1 wherein applications or data are synchronized between the central database and the second  
2 storage medium and wherein the applications program interface and communications control  
3 module establish a seamless link between the data in the central database and the data on the  
4 second storage medium.

5               34. The information management and synchronous communications system of  
6 claim 33 wherein the communications control module and the applications program interface  
7 enable the automatic generation of and updating of operator menus or screens on the second  
8 computing device based on data from the central database.

9               35. The information management and synchronous communications system of  
10 claim 1 wherein the second menu is generated by manually selecting items from the first menu,  
11 adding items to the second menu or assigning parameters to items in the second menu.

12               36. The information management and synchronous communications system of  
13 claim 1 wherein the data is synchronized by digital transmission between the data storage device  
14 connected to the central processing unit and at least one other computing device.

15               37. The information management and synchronous communications system of  
16 claim 12 wherein the modified menu is generated by manually selecting items from the master  
17 menu.

18               38. The information management and synchronous communications system of  
19 claim 12 wherein the data is synchronized by digital transmission between the data storage  
20 device and at least one other computing device.

21               39. The computer system of claim 20 wherein the data is synchronized by digital  
22 transmission between the storage device and at least one other data storage medium.

1                  40. The information management and synchronous communications system of  
2 claim 29 wherein the applications or data are synchronized by digital data transmission between  
3 the central database and at least one wireless handheld computing device.

4                  41. The information management and synchronous communications system of  
5 claim 32 wherein the applications or data are synchronized by digital data transmission between  
6 the central database, at least one wireless computing device and at least one wireless paging or  
7 beeper device.

8                  42. The information management and synchronous communication system of  
9 claim 29, 32, or 33 wherein the synchronized data relates to orders.

10                43. The information management and synchronous communication system of  
11 claim 29, 32, or 33 wherein the synchronized data relates to waitlists

12                44. The information management and synchronous communication system of  
13 claim 29, 32, or 33 wherein the synchronized data relates to reservations.

14                45. The information management and synchronous communication system of  
15 claim 29 or 32 wherein the synchronized data is sent from at least one of the wireless computing  
16 devices to a receiver at a valet parking base station.

17                46. The information management and synchronous communication system of  
18 claim 29 or 32 wherein the synchronized data is sent from at least one of the wireless computing  
19 devices to a wireless paging device.

20                47. The information management and synchronous communication system of  
21 claim 33 wherein the synchronized data is sent from said second computing device to a receiver  
22 at a valet parking base station.

1               48. The information management and synchronous communication system of  
2 claim 33 wherein the synchronized data is sent from said second computing device to a wireless  
3 paging device.

4               49. The information management and synchronous communication system of  
5 claim 1 wherein said application software acts to facilitate generation of the second menu such  
6 that the second menu is appropriate for a specified time of day.

7               50. The information management and synchronous communication system of  
8 claim 1 wherein said application software further facilitates the generation of multiple menus,  
9 each of said multiple menus being appropriate for a particular time of day.

10              51. The information management and synchronous communication system of  
11 claim 1 wherein the facilitation of second menu generation by said application software takes  
12 into account specified parameters, such that the second menu so generated includes items that  
13 satisfy the specified parameters.

14              52. The information management and synchronous communication system of  
15 claim 51 wherein the second menu so generated further includes manually selected items.

16              53. The information management and synchronous communication system of  
17 claim 1 wherein the second menu is applicable to table-based customer ordering.

18              54. The information management and synchronous communication system of  
19 claim 1 wherein the second menu is applicable to drive-through customer ordering.

20              55. The information management and synchronous communication system of  
21 claim 1 wherein the second menu is applicable to customer ordering via internet .

22              56. The information management and synchronous communication system of  
23 claim 1 wherein the second menu is applicable to customer ordering via telephone.

1               57. The information management and synchronous communication system of  
2 claim 1 wherein the second menu is applicable to customer ordering via wireless device.

3               58. The information management and synchronous communication system of  
4 claim 51 wherein said specified parameters involve recipe content.

5               59. The information management and synchronous communication system of  
6 claim 12 wherein said microprocessor, operating system, and application software are further  
7 operative to create said modified menu such that the modified menu is appropriate for a specified  
8 time of day.

9               60. The information management and synchronous communication system of  
10 claim 12 wherein said microprocessor, operating system, and application software are further  
11 operative to create multiple menus, each of said multiple menus being appropriate for a  
12 particular time of day.

13               61. The information management and synchronous communication system of  
14 claim 12 wherein the creation of said modified menu by said microprocessor, operating system,  
15 and application software takes into account specified parameters, such that the modified menu so  
16 created includes items that satisfy the specified parameters.

17               62. The information management and synchronous communication system of  
18 claim 61 wherein the modified menu so generated further includes manually selected items.

19               63. The information management and synchronous communication system of  
20 claim 12 wherein the modified menu is applicable to table-based customer ordering.

21               64. The information management and synchronous communication system of  
22 claim 12 wherein the modified menu is applicable to drive-through customer ordering.

1           65. The information management and synchronous communication system of  
2 claim 12 wherein the modified menu is applicable to customer ordering via internet.

3           66. The information management and synchronous communication system of  
4 claim 12 wherein the modified menu is applicable to customer ordering via telephone.

5           67. The information management and synchronous communication system of  
6 claim 12 wherein the modified menu is applicable to customer ordering via wireless device.

7

8           68. The information management and synchronous communication system of  
9 claim 61 wherein said specified parameters involve recipe content.

10          69. An information management and synchronous communications system for  
11 generating and transmitting menus comprising:

- 12           a. a central processing unit,
- 13           b. a data storage device connected to said central  
14           processing unit,
- 15           c. an operating system including a graphical user  
16           interface,
- 17           d. a first menu consisting of menu categories, said menu  
18           categories consisting of menu items, said first menu  
19           stored on said data storage device and displayable in a  
20           window of said graphical user interface in a hierarchical  
21           tree format,
- 22           e. a modifier menu stored on said data storage device and  
23           displayable in a window of said graphical user  
24           interface,
- 25           f. a sub-modifier menu stored on said data storage device  
26           and displayable in a window of said graphical user  
27           interface, and
- 28           g. application software for generating a second menu from  
29           said first menu and transmitting said second menu to a  
30           wireless handheld computing device or Web page,

1                   wherein the application software facilitates the generation of the second menu by  
2       allowing selection of categories and items from the first menu, addition of menu categories to the  
3       second menu, addition of menu items to the second menu and assignment of parameters to items  
4       in the second menu using the graphical user interface of said operating system, said parameters  
5       being selected from the modifier and sub-modifier menus, wherein said second menu is  
6       applicable to a predetermined type of ordering.

7                   70. The system of claim 69 wherein the type of ordering is table-based customer  
8       ordering.

9                   71. The system of claim 69 wherein the type of ordering is drive-through  
10      customer ordering.

11                  72. The system of claim 69 wherein the type of ordering is customer ordering via  
12      internet.

13                  73. The system of claim 69 wherein the type of ordering is customer ordering via  
14      telephone.

15                  74. The system of claim 69 wherein the type of ordering is customer ordering via  
16      wireless device.

17                  75. An information management and synchronous communications system for  
18       generating and transmitting menus comprising:

- 19                   a.        a central processing unit,
- 20                   b.        a data storage device connected to said central processing unit,
- 21                   c.        an operating system including a graphical user interface,

1                           d.     a first menu consisting of menu categories, said menu categories  
2     consisting of menu items, said first menu stored on said data storage device and displayable in a  
3     window of said graphical user interface in a hierarchical tree format,

4 e. a modifier menu stored on said data storage device and displayable  
5 in a window of said graphical user interface,

6                           **f.**        a sub-modifier menu stored on said data storage device and  
7    displayable in a window of said graphical user interface, and

8 g. application software for generating a second menu from said first  
9 menu and transmitting said second menu to a wireless handheld computing device or Web page,

0 wherein the application software facilitates the generation of the second menu by  
1 allowing selection of categories and items from the first menu, addition of menu categories to the  
2 second menu, addition of menu items to the second menu and assignment of parameters to items  
3 in the second menu using the graphical user interface of said operating system, said parameters  
4 being selected from the modifier and sub-modifier menus, wherein said application software acts  
5 to facilitate generation of the second menu such that the second menu is appropriate for a  
6 specified time of day.

17           76. An information management and synchronous communications system for  
18 generating and transmitting menus comprising:

a. a central processing unit,

20            b.     a data storage device connected to said central processing unit,  
21            c.     an operating system including a graphical user interface,

1                   d.        a first menu consisting of menu categories, said menu categories  
2   consisting of menu items, said first menu stored on said data storage device and displayable in a  
3   window of said graphical user interface in a hierarchical tree format,

4                   e.        a modifier menu stored on said data storage device and displayable  
5   in a window of said graphical user interface,

6                   f.        a sub-modifier menu stored on said data storage device and  
7   displayable in a window of said graphical user interface, and

8                   g.        application software for generating a second menu from said first  
9   menu and transmitting said second menu to a wireless handheld computing device or Web page,  
10                  wherein the application software facilitates the generation of the second menu by  
11   allowing selection of categories and items from the first menu, addition of menu categories to the  
12   second menu, addition of menu items to the second menu and assignment of parameters to items  
13   in the second menu using the graphical user interface of said operating system, said parameters  
14   being selected from the modifier and sub-modifier menus, wherein said application software  
15   further facilitates the generation of multiple menus, each of said multiple menus being  
16   appropriate for a particular time of day.

17                77.      An information management and synchronous communications system for  
18   generating and transmitting menus comprising:

19                a.        a central processing unit,

20                b.        a data storage device connected to said central processing unit,

21                c.        an operating system including a graphical user interface,

1 d. a first menu consisting of menu categories, said menu categories  
2 consisting of menu items, said first menu stored on said data storage device and displayable in a  
3 window of said graphical user interface in a hierarchical tree format,

4 e. a modifier menu stored on said data storage device and displayable  
5 in a window of said graphical user interface,

6 f. a sub-modifier menu stored on said data storage device and

7 displayable in a window of said graphical user interface, and

8 g. application software for generating a second menu from said first  
9 menu and transmitting said second menu to a wireless handheld computing device or Web page,

10 wherein the application software facilitates the generation of the second menu by  
11 allowing selection of categories and items from the first menu, addition of menu categories to the  
12 second menu, addition of menu items to the second menu and assignment of parameters to items  
13 in the second menu using the graphical user interface of said operating system, said parameters  
14 being selected from the modifier and sub-modifier menus, wherein the facilitation of second  
15 menu generation by said application software takes into account specified parameters, such that  
16 the second menu so generated includes items that satisfy the specified parameters.

17                           78. The information management and synchronous communication system of  
18   claim 77 wherein said specified parameters involve recipe content.

19

20                    79. An information management and synchronous communications system for  
21        use with wireless handheld computing devices and the internet comprising:

a. a central database containing hospitality applications and data,

- 1                   **b.** at least one wireless handheld computing device on which hospitality  
2                         applications and data are stored,  
3                   **c.** at least one Web server on which hospitality applications and data are  
4                         stored,  
5                   **d.** at least one Web page on which hospitality applications and data are  
6                         stored,  
7                   **e.** an application program interface, and  
8                   **f.** a communications control module,  
9                         wherein applications and data are synchronized between the central data base, at  
10          least one wireless handheld computing device, at least one Web server and at least one Web  
11          page; wherein the application program interface enables integration of outside applications with  
12          the hospitality applications and wherein the communications control module is an interface  
13          between the hospitality applications and any other communications protocol, wherein the  
14          synchronized data relates to orders.

- 15                 80. An information management and synchronous communications system for  
16          use with wireless handheld computing devices and the internet comprising:  
17                   **a.** a central database containing hospitality applications and data,  
18                   **b.** at least one wireless handheld computing device on which  
19          hospitality applications and data are stored,  
20                   **c.** at least one Web server on which hospitality applications and data  
21          are stored,  
22                   **d.** at least one Web page on which hospitality applications and data  
23          are stored,

- e. an application program interface, and
  - f. a communications control module,

wherein applications and data are synchronized between the central data base, at  
a wireless handheld computing device, at least one Web server and at least one Web  
server, the application program interface enables integration of outside applications with  
any applications and wherein the communications control module is an interface  
between hospitality applications and any other communications protocol, wherein the  
data relates to waitlists.

81. An information management and synchronous communications system for

use with wireless handheld computing devices and the internet comprising:

- a. a central database containing hospitality applications and data,
  - b. at least one wireless handheld computing device on which
  - ns and data are stored,
  - c. at least one Web server on which hospitality applications and data
  - d. at least one Web page on which hospitality applications and data
  - e. an application program interface, and
  - f. a communications control module,

wherein applications and data are synchronized between the central data base, at  
least one wireless handheld computing device, at least one Web server and at least one Web  
server; the application program interface enables integration of outside applications with  
other applications and wherein the communications control module is an interface

1       between the hospitality applications and any other communications protocol, wherein the  
2       synchronized data relates to reservations.

3                 82. The information management and synchronous communication system of  
4       claim 79, 80, or 81 wherein the data is sent to a receiver at a valet parking base station.

5                 83. The information management and synchronous communication system of  
6       claim 79, 80, or 81 wherein the data is sent to a wireless paging device.

7                 84. The method of claim 20 wherein said application software acts to facilitate  
8       generation of the second menu such that the second menu is appropriate for a specified time of  
9       day.

10                85. The method of claim 20 wherein said application software facilitates the  
11       generation of multiple menus, each of said multiple menus being appropriate for a particular  
12       time of day.

13                86. The method of claim 20 wherein said application software acts to facilitate  
14       generation of the second menu, the taking into account specified parameters such that the second  
15       menu so generated includes items that satisfy the specified parameters.

16                87. The method of claim 86 wherein the second menu so generated further  
17       includes manually selected items.

18                88. The method of claim 20 wherein the second menu is applicable to table-based  
19       customer ordering.

20                89. The method of claim 20 wherein the second menu is applicable to drive-  
21       through customer ordering.

22                90. The method of claim 20 wherein the second menu is applicable to customer  
23       ordering via internet .

1           91. The method of claim 20 wherein the second menu is applicable to customer  
2 ordering via telephone .

3           92. The method of claim 20 wherein the second menu is applicable to customer  
4 ordering via wireless device.